AMENDMENTS TO THE SPECIFICATION

Please amend paragraph 0012 of the published application as follows:

[0012] A solar device having a multijunction ~~multifunction~~ solar cell structure with a bypass diode is disclosed. The bypass diode provides a reverse bias protection for the multijunction solar cell structure. In one embodiment, the multijunction ~~multifunction~~ solar cell structure includes a substrate, a bottom cell, a middle cell, a top cell, a bypass diode, a lateral conduction layer, and a shunt. The lateral conduction layer is deposited over the top cell. The bypass diode is deposited over the lateral conduction layer. One side of the shunt is connected to the substrate and another side of the shunt is connected to the lateral conduction layer. In another embodiment, the bypass diode contains an i-layer to enhance the diode performance.

Please amend paragraph 0025 of the published application as follows:

[0025] A method and an apparatus of solar cell with multijunction ~~multifunction~~ solar cell structure having a bypass diode with an i-layer are described.

Please amend paragraph 0034 of the published application as follows:

[0034] If a cell is shaded or otherwise not receiving sunlight, in order for the current to choose the diode path 202, the turn on voltage for the diode path 202 must be less than the breakdown voltage along the cell path 201. The breakdown voltage along the cell path will typically be at least five volts, if not more. The Schottky junction 111 requires a relatively small amount of voltage to "turn on"-600 millivolts ~~milivolts~~. However, to pass through the Ge junction 104, the bias of the Ge junction 104 must be reversed, requiring a large voltage. Reversing the bias of the Ge junction 104 requires approximately 9.4 volts, so nearly ten volts are needed for the current to follow the diode path 202 in FIG. 2A. Ten volts used to reverse the bias of the Ge junction is ten volts less than otherwise would be available for other applications. The device

illustrated by FIG. 4 is therefore a functioning bypass diode, but an inefficient one from a power utilization perspective.

Please amend paragraph 0054 of the published application as follows:

[0054] FIG. 6 is a block diagram 600 illustrating a schematic sectional view showing a multijunction solar cell structure 640 having a bypass diode 620 in accordance with one embodiment of the present invention. Diagram 600 includes a substrate 602, a multijunction solar cell structure 640, a bypass diode 620, a well 650, and a shunt 630. In one embodiment, the substrate 602 is a germanium substrate. The multijunction ~~multifunction~~ solar cell structure 640 further includes a top, middle, and bottom subcells. It should be noted that terms solar cells, cells, and subcells will be used interchangeably herein. The multijunction solar cell structure is divided into two portions 642-644, wherein portion 642 includes solar cell(s) for converting solar power to electrical power and portion 644 contains a bypass diode 620.

Please amend paragraph 0055 of the published application as follows:

[0055] Referring to FIG. 6, the multijunction solar cell structure 640 is a multijunction solar cell structure wherein a bottom solar cell 604 is deposited over the substrate and a middle solar cell 606 is deposited over the bottom solar cell 604. The top solar cell 608 of the multijunction ~~multifunction~~ solar cell structure is deposited over the middle solar cell 606. Each solar cell within the multijunction solar cell structure is designed to convert the solar energy within a range of wavelength λ of the solar spectrum. For example, the top solar cell 608 of the multijunction solar cell structure is designed to convert the high frequency portion of the solar spectrum into electrical energy. The high frequency portion may include ultraviolet, X-rays, and/or Gamma rays of the solar spectrum. In one embodiment, the high frequency portion covers λ in a range of approximately 700 nm to 100 nm. The middle solar cell 606 is responsible

for converting the solar energy in a range of ultraviolet, visible light, and/or portions of infrared of the solar spectrum, which may be approximately between 90 nm to 1000 nm. The bottom solar cell 604 is responsible for converting the solar energy in a range of infrared, microwaves, and/or radio waves, which may be approximately between 700 nm and/or greater.